



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,240	01/22/2004	Florent Picard	PET-2120	2023
23599	7590	06/17/2005	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			KEYS, ROSALYND ANN	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,240

Applicant(s)

PICARD ET AL.

Examiner

Rosalynd Keys

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/22/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### *Status of Claims*

1. Claims 10 are pending.  
Claims 1-10 are rejected.

### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

3. The information disclosure statement (IDS) submitted on January 22, 2004 has been considered by the examiner.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 9 is indefinite because of the use of the phrase "said hydrocarbon fraction has a higher boiling point that is less than 100°C". The Examiner is not clear as to what the hydrocarbon fraction has a higher boiling point than, i.e., what component is the hydrocarbon fraction's boiling point higher than.

Art Unit: 1621

7. Claim 12 recites the limitation "in which said boiling point is less than 60°C" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (US 6,123,830).

Gupta et al. teach a hydroprocessing stage optionally followed by a separation step (see

Art Unit: 1621

entire disclosure, in particular column 11, line 60 to column 12, line 5). During the hydroprocessing stage unsaturated hydrocarbons such as olefins and diolefins are converted to paraffins using a typical hydrogenation catalyst and objectionable elements are also removed including nitrogen-containing and sulfur-containing compounds (see column 3, lines 47-62 and column 8, lines 12-20). The hydroprocessing catalyst is disclosed as any hydroprocessing catalyst suitable for aromatic saturation, desulfurization, denitrogenation or any combination thereof, preferably the catalyst comprises at least one Group VIII metal, preferably cobalt or nickel, and a Group VI metal, preferably molybdenum, on an inorganic refractory support, preferably alumina or silica-alumina (see column 9, lines 5-42). The Group VIII metal is present in an amount ranging from 2-20 wt.%. The Group VI metal is present in an amount ranging from 5-50 wt.%. The hydroprocessing conditions are within the claimed conditions (see column 8, lines 30). Any differences are considered obvious, unless they produce a new and unexpected result. See *In re Aller et al.*, (CCPA 1955) 220 F2d 454, 105 USPQ 233. The Examiner believes that the hydrogen content of Gupta et al. is within the claimed limitations (see claim 8), since Gupta et al. desires to convert the diolefins to paraffins (see column 8, lines 14-16).

Gupta et al. differ from the instant claims in that Gupta et al. do disclose the separation steps with the same details as the Applicants. However, Gupta et al. do teach fractionation and that the content of the fractions may depend on factors such as the type of separation equipment employed. Thus, the Examiner believes that Gupta et al. at least motivates the skilled artisan to fractionate the hydroprocessed effluent in any manner desired by the artisan, including the claimed manner, depending upon the desired use of the effluent. Further, the Examiner believes that Gupta et al. provides motivation for separating the hydroprocessing effluent in at least two fractions wherein one fraction contains a decreased amount of nitrogen-

Art Unit: 1621

containing and sulfur-containing compounds (see column 2, lines 4-17 and column 3, lines 47-67).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Podrebarac (US 2004/0178123 A1) teach a process for hydrodesulfurization.

Podrebarac teach that the product obtained after hydrotreatment may be fractionated or simply flashed to release the hydrogen sulfide and collect the now desulfurized naphtha (see paragraphs 0010 to 0012).


Kolodziej et al. (US 5,968,347) provide a more efficient hydrotreatment process wherein hydrodenitrogenation and hydrosulphurization occur at the same time (see entire disclosure).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalyn Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M and F 3:00-8:00 pm and T-TR 5:30-10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Rosalynd Keys  
Primary Examiner  
Art Unit 1621

June 14, 2005